

Table 2. Measured Fluorescence from Interlab Plasmids

Sample	Mean RFU ^{2.}	Signal/Noise Ratio ^{3.}	Mean OD ^{4.}	Standard Deviation of RFU
Control (KillerRed plasmid) ^{1.}	118	N/A ^{7.}	0.46	2
J23101 + E0240	44850	22366	0.47	826
J23115(M) + E0240 ^{5.}	1134	508	0.47	11
J23115 + E0240 ^{6.}	398	140	0.52	11
pSB3K3	6485	3183	0.51	110

1. Control sample was Top10 Cells, containing KillerRed Plasmid, which fluoresces red at 585 nm, and should show no fluorescence at the excitation wavelength for GFP

2. RFU = Relative Fluorescence Units

3. Signal to noise ratio is a way of expressing relative fluorescent units. The formula used to calculate this ratio is:

$$\text{SNR} = [\text{mean signal } (V_s) - \text{Background } (V_b)] / \text{background standard deviation } (V_{\text{rms}})$$

Source: Taylor L, Waggoner A, Murphy R, Lanni F, Birge R. *Applications of Fluorescence in the Biomedical Sciences*, Part II: Imaging and Quantitative Fluorescence Microscopy; 267-269

4. OD = Absorbance from cells at 670 nm

5. J23115(M) is the original J23115 part (with the 2 point mutations) we received from the registry

6. J23115 is the real J23115 part, which we had synthesized

7. N/A = no answer